05-24-04

AF 1616 1fw

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of Walter H. Runkis — September 29, 2003

Serial No.: 09/880,322 — Group Art Unit 1616

Filed: June 13, 2001 — Examiner: S. Mark Clardy

For: "Composition for treating cells and method for qualitatively and quantitatively customizing the formulation thereof"

TRANSMITTAL LETTER, APPEAL BRIEF

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Attached hereto is an Appeal Brief for the Notice of Appeal filed February 17, 2004.

Respectfully submitted,

Walter H. Runkis

POB 593
Botsford, CT 06404
203-445-9975

FILING RECEIPT

FILING DATE: September 29, 2003

DOCKET NUMBER: RUNKIS-1

TITLE OF INVENTION: Composition for treating cells and method for qualitatively and quantitatively customizing the formulation thereof

SEND ALL CORRESPONDENCE TO: Walter H. Runkis, POB 593, Botsford, CT, 06404

USSN: 09/880,322

APPLICANT[S] Walter H. Runkis

[ ] NEW APPLICATION WITH TRANSMITTAL LETTER
[ ] UTILITY [ ] DESIGN

[ ] SPECIFICATION CONSISTING OF _____ PAGES

[ ] COMBINED DECLARATION AND POWER OF ATTORNEY

[ ] VERIFIED SMALL ENTITY STATEMENT

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[ ] RESPONSE TO FIRST OFFICE ACTION AND AMENDMENT

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Receipt is hereby acknowledged of the papers filed as indicated in regard to the above indicated application. A stamped, self-addressed envelope is enclosed.

COMMISSIONER OF PATENTS AND TRADEMARKS

Appl No.	:	09/880,322	Confirmation No. 5476
Appellant	:	Walter H. Runkis	
Filed	:	June 13, 2001	
TC/A.U	:	1616	
Examiner	:	S. Mark Clardy	
Docket No.	:	RUNKIS-1	
Customer No.	:	UKN	

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

BRIEF ON APPEAL

REAL PARTY IN INTEREST

The real party in interest in respect to the instant appeal is GrowWonders Corporation.

RELATED APPEALS AND INTERFERENCES

There are no appeals and/or interferences with respect to the instant appeal.

STATUS OF CLAIMS

Claims 1-5 are pending, claim 6 is cancelled, claims 7-12 are pending, claim 13 is cancelled, and claim 14-26 are pending. Claims 1-5, 7-12 and 14-26 are appealed.

STATUS OF AMENDMENTS

No amendments were filed subsequent final rejection.

SUMMARY OF INVENTION

The instant invention relates to a composition of solution stable Ca.sup.++, Mg.sup.++, N.sup.3-, and S.sup.6+ moieties, a method for using the composition, and a method of forming the composition by varying the quantitative proportions of at least the solution stable Ca.sup.++ and Mg.sup.++ moieties in a solution. In its more complex expression, the invention provides a composition that includes compensating proportions of substantially any of the essential micronutrients or macronutrients in a solution stable form. In a first preferred embodiment, the invention has utility as a soil treatment composition. In a second preferred embodiment, the invention has utility as a cell culture medium.

ISSUE

The sole issue is whether the Examiner erred in finally rejecting claims 1-5, 7-12 and 14-26 as unpatentable over the combined teachings of Newsom, Jr. (US 4,383,846), Woodhouse (US 2,237,826), Facere (US 2,739,886) and John Deere, *Fundamentals of Machine Operation,* Chap. 2, *"Fertilizers and Lime."* pp. 15-35, (1976).

GROUPING OF CLAIMS

Claims 1-5 stand or fall on the Board's decision as to claim 1. Claims 7-12 stand or fall on the Board's decision as to claim 7. Claims 14-20 stand or fall on the Board's decision as to claim 14. Claims 21-26 stand or fall on the Board's decision as to claim 21.

ARGUMENT

Woodhouse teaches the addition of sulfamic acids and/or sulfamic acid salts merely for the purposes of ***nitrifying liquid fertilizer solutions e.g., increasing the concentration of soluble nitrogen and/or ammonia moieties in such solutions*** (see

e.g., page 1, column 2, lines 10-21 and lines 30-34). A thorough reading of Woodhouse discloses no chemical reaction taught in the practice of the Woodhouse invention.

The Examiner had made no direct rebuttal to the arguments in appellant's response to the first office action, rebutting his contention of chemical reaction by his combination of prior art references. Instead the Examiner states only that:

> "Applicant argues that the compositions of the prior art [Newsom][1] do not involve reacting the components; however, inasmuch as the components are ionic species in solution, ***it would appear*** that reactions between the ***ionic species*** necessarily take place, particularly in view of the fact that ***indications of chemical reactions occur*** such as ***precipitations*** (emphasis added)."

Similarly, in the advisory action, the Examiner's only comments were:

> "...[A]pplicant's components ***are combined as in the prior art.*** If the components reacted for applicant, ***it would appear that they would have reacted when combined in the prior art.*** Absent evidence of unexpected results in comparison with the prior art, the combination of components remains obvious." (bold emphasis added).

Although, not expressly stated, the Examiner's forgoing arguments (and, indeed, his entire position) would appear to be based upon the *inherency* of a chemical reaction in the prior art. It is well settled by the CAFC in, *In re Robertson*, 169 F.3d 743, 49 U.S.P.Q.2d 1949 (Fed. Cir. 02/25/1999), that:

> "***Inherency, however, may not be established by probabilities or possibilities.*** The mere fact that a certain thing may result from a given set of circumstances is not sufficient." Id. at 1269, 20 U.S.P.Q.2d at 1749 (quoting In re Oelrich, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981)." (bold emphasis added).

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[1] Based upon reading of the record as a whole, appellant presumes that the Examiner is making particular reference to Newsom when he refers to the "prior art." As the Examiner has made no response to the forgoing contention, appellant presume it to be the case.

Here the Examiner purports to base his contention that the prior art teaches a chemical reaction on mere ***probabilities or possibilities.*** It is respectfully submitted that the Examiner's position based upon inherency must fail in light of *Robertson.*

The arguments of the Examiner are characteristic of the Examiner's throughout the record. These arguments can best be described as "shotgun rejections." This Board has expressed its abhorrence for such rejections. See, e.g., *Ex parte JOHN R. PATTON, LINDA FOSTER, and ROBERT M. PLATZ,* Appeal No. 2002-1128, Application No. 08/668,036, wherein this Honorable Board opined:

> "Here, the examiner issued what could only be described as a "***shotgun rejection*** of claims 15 through 24 and 26 through 34 under 35 U.S.C. § 103(a) as unpatentable over Platz and AKZO" of record by themselves or in combination," further in view of Maniar, Okada [and] Hirai "by themselves or in combination"... By formatting rejections ***in this manner, the examiner obfuscated rather than clarified the issues on appeal and we would be constrained to reverse on procedural grounds alone.*** Cf. In re Herrick, 344 F.2d 713, 716, 145 USPQ 400, 401 (CCPA 1965) ***(Because of indefinite statement of the grounds of rejection, 'the existing situation does not permit rational isolation and determination of the legal issues which may be present.")*** Accord, Ex parte Blanc,13 USPQ2d 1383 (Bd. Pat. App. & Int. 1989)... In conclusion, for the reasons set forth in the body of this opinion, we reverse the examiner's rejections of the appealed claims under 35 U.S.C. § 103(a).'" (bold emphasis added).

Otherwise, appellant further contends that Examiner's forgoing statements are untenable for at least the following reasons:

1. The most thorough reading of the Newsom reference provides no direct disclosure that his invention involves a chemical reaction. Newsome equates *reagents* ***(including his disclosed sulfamic acids***

and/or sulfamic acid salts) with ***sulfactants***[2] (column 3, lines 47-49), ***and not chemical reactants.***

2. The ***precipitates*** that the Examiner attributes to ***indications of chemical reactions***,[3] can be attributed to phenomenon ***other than chemical reaction,*** e.g., solubility effect, flocculation,[4] etc. At best Newsom teaches the use sulfamic acid and/or sulfamates in his invention, ***only*** as surfactants. The chemical characteristics of a surfactant remain unchanged throughout its use ***as a surfactant***. No chemical reaction occurs with respect to the surfactant ***throughout its use as a surfactant.***

3. Thus, when Newsom uses sulfamic acid/sulfamates as a surfactant, no chemical change occurs with respect to such sulfamic acid/sulfates ***throughout their use a surfactants*** in the invention of Newsom.

4. The Newsom invention involves the "addition of surfactant compounds which ***retard the formation*** of magnesium-containing ***precipitates***..." (See *e.g.,* col. 3, lns 9-14; col. 3, lns 47-49; col. 4, lns 20-35). Thus, Newsom adds his surfactants (including sulfamate moieties) ***to avoid reactions*** that produce precipitates rather than to provide them. Thus, ***arguendo,*** even if Newsom teaches a chemical reaction, as the Examiner purports, Newsom reference would be ***teaching away*** from such a chemical reaction ***by retarding it***. Otherwise appellant's

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[2] Hawley's Condensed Chemical Dictionary defines surfactant or surface active agent as: "[A]ny compound that reduced surface tension when dissolved in water or water solution or which reduces interfacial tension between two liquids, or between a liquid and a solid."

[3] Appellant persists in his contention that Newsom teaches, *if anything,* retarding chemical reaction, and thus *teaches away* from the Examiner's speculation of a chemical reaction occurring in the invention of Newsom.

[4] Indeed, Newsom teaches flocculation at col. 3, lns 14-18.

arguments regarding "PFCO (Prima Facie Case of Obviousness) NOT MADE OUT AGAINST THE CLAIMS," PFCO MADE OUT BUT REBUTTED," and "'*TEACHES AWAY*' DOCTRINE" apply with full force in the instant Brief on Appeal, and thus are incorporated herein, in their entireties.

For any and or all of the forgoing reasons, appellant respectfully contends that the Examiner's hypothesized chemical reaction is based upon mere speculation. It is well settled that:

> ***"...[S]peculation is not a sufficient basis for a prima facie case of obviousness.*** *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968); *In re Sporck*, 301 F.2d 686, 690, 133 USPQ 360, 364 (CCPA 1962).

See also: *American Cyanamid Co. v. Federal Trade Commission*, 363 F.2d 757 (6th Cir. 06/16/1966); *In re Steele*, 305 F.2d 859, 862-63, 134 USPQ 292, 295 (CCPA 1962); *In re Deuel,* 51 F.3d 1552 (Fed. Cir. 03/28/1995); *In re Roemer*, 258 F.3d 1303 (Fed. Cir. 07/24/2001); *In re Warner*, 54 C.C.P.A. 1628, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057, 19 L. Ed. 2d 857, 88 S. Ct. 811 (1968); *In re Jones*, 958 F.2d 347, 351, 21 USPQ2d 1941, 1944 (Fed. Cir. 1992); *In re Laskowski,* 871 F.2d 115, 117, 10 USPQ2d 1397, 1398-99 (Fed. Cir. 1989); *In re de Jong,* 57 C.C.P.A. 701, 416 F.2d *1401, 1404, 163 USPQ 479, 482 (CCPA 1969);* Panduit *Corp. v. Dennison Manufacturing Co., 810 F.2d 1561 (Fed. Cir. 01/23/1987); In* re GPAC Inc., 57 F.3d 1573 (Fed. Cir. 06/20/1995); *In re Deuel,* 51 F.3d 1552 (Fed. Cir. 03/28/1995); *Felburn v. New York Central Railroad Co.,* 350 F.2d 416 (6th Cir. 08/31/1965); *In re Rouffet,* 47 U.S.P.Q.2d 1453, 149 F.3d 1350 (Fed. Cir. 07/15/1998); all generally condemning the practice of speculation and hindsight reconstruction as a bases for forming a prima facie case of obviousness. Here, it is respectfully submitted that in purporting to have made out a prima facie case of obviousness against the

claims, the Examiner has succumbed to the allure of speculation and the forbidden hindsight reconstruction.

For any or all of the forgoing reasons, it is respectfully submitted that the final rejection of 1-5, 7-12 and 14-26 by the Examiner be *REVERSED* and that this Honorable Board should hold that 1-5, 7-12 and 14-26 be *ALLOWED.*

Respectfully submitted,

Walter H. Runkis

May 21, 2004

Date

APPENDIX

Listing of Claims:

Claim 1. A method for treating plants in a body of soil, comprising: contacting said plants in said body of soil with a composition comprising the product of a moderately water soluble first compound including a sulfamic moiety and a substantially water insoluble second compound including macronutrient and/or micronutrient moieties chemically reacted sufficient to provide substantially any predetermined combination of water solution-stable macronutrients and/or micronutrients of substantially any concentration and/or concentrations.

Claim 2. The method of claim 1, wherein said composition further comprises: a plant promoting effective amount of solution-stable Ca.sup.++ moieties; a plant promoting effective amount of solution-stable S.sup.6+ moieties; a plant promoting effective amount of solution-stable Mg.sup.++ moieties; and, a plant promoting effective amount of solution-stable N.sup.3- moieties.

Claim 3. The method of claim 2, wherein said solution-stable moieties are a reaction product formed from the reaction of: a first reactant selected from the group consisting of Sulfamic acid, a water soluble Sulfamic acid derivative, an oil soluble Sulfamic acid derivative that can be reacted to provide a water solution-stable Sulfamate, and combinations thereof; and, a second micronutrient and/or macronutrient moiety-including reactant selected from the group consisting of a carbonate, a hydroxide, a carbonate hydroxide, a hydroxide oxide, a metal, and combinations thereof.

Claim 4. The method of claim 2, wherein the solution-stable moieties are formed by reacting effective amounts of: at least one member selected from the group consisting

of: a powdered micronutrient metal, a powdered macronutrient metal, Dolomite, Aragonite (Calcium Carbonate), Artinite (Hydrated Magnesium Carbonate Hydroxide), Aurichalcite (Zinc Copper Carbonate Hydroxide), Azurite (Copper Carbonate Hydroxide), Barringtonite (Hydrated Magnesium Carbonate), Baylissite (Hydrated Potassium Magnesium Carbonate), Brugnatellite (Hydrated Magnesium Iron Carbonate Hydroxide), Butschliite (Potassium Calcium Carbonate), Calcite (Calcium Carbonate), Gaspeite (Nickel Magnesium Iron Carbonate), Magnesite (Magnesium Carbonate), Rhodochrosite (Manganese Carbonate), Siderite (Iron Carbonate), Smithsonite (Zinc Carbonate), Ankerite (Calcium Iron Carbonate), Huntite (Calcium Magnesium Carbonate), Kutnohorite (Calcium Manganese Magnesium Iron Carbonate), Minrecordite (Calcium Zinc Carbonate), Norsethite (Barium Magnesium Carbonate), Fairchildite (Potassium Calcium Carbonate), Georgeite (Hydrated Copper Carbonate Hydroxide), Hellyerite (Hydrated Nickel Carbonate), Hydrozincite (Zinc Carbonate Hydroxide), Ikaite (Hydrated Calcium Carbonate), Kalicinite (Potassium Bicarbonate), Lansfordite (Hydrated Magnesium Carbonate), Loseyite (Manganese Zinc Carbonate Hydroxide), Malachite (Copper Carbonate Hydroxide), Monohydrocalcite (Hydrated Calcium Carbonate), Nesquehonite (Hydrated Magnesium Bicarbonate Hydroxide), Pokrovskite (Hydrated Magnesium Carbonate Hydroxide), Pyroaurite (Hydrated Magnesium Iron Carbonate Hydroxide), Glaukospherite (Copper Nickel Carbonate Hydroxide), Mcguinnessite (Magnesium Copper Carbonate Hydroxide), Nullaginite (Nickel Carbonate Hydroxide), Rosasite (Copper Zinc Carbonate Hydroxide), Zincrosasite (Zinc Copper Carbonate Hydroxide), Sclarite (Zinc Magnesium Manganese Carbonate Hydroxide), Sergeevite (Hydrated Calcium Magnesium Carbonate Bicarbonate Hydroxide), Sjogrenite (Hydrated Magnesium Iron Carbonate Hydroxide), Teschemacherite (Ammonia Bicarbonate), Vaterite (Calcium Carbonate), Zaratite (Hydrated Nickel Carbonate Hydroxide), Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide,

Tetramethylammonium hydroxide, Tetraethylammonium hydroxide, Iron (III) oxyhydroxide, Iron (III) hydroxide (gamma), Iron (III) hydroxide (alpha), Potassium hydroxide, Nickel (II) hydroxide, Hexane-1,6-bis (tributylammonium) dihydroxide, Calcium hydroxide, Tetra-n-propylammonium hydroxide, Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Cobalt (II) hydroxide, Copper (II) carbonate dihydroxide, Copper (II) carbonate (basic), Copper (II) hydroxide, Ammonium hydroxide, Magnesium carbonate hydroxide, Methylboron dihydroxide, Magnesium hydroxide, Molybdenum hydroxide oxide phosphate Calcium phosphate hydroxide, Calcium phosphate tribasic, Calcium hydroxide, Zinc subcarbonate, Zinc carbonate (basic), Zinc carbonate hydroxide, Zinc hydroxide, Potassium bicarbonate, Potassium hydrogen carbonate, Potassium carbonate, Nickel (II) carbonate, Nickel (II) carbonate hydroxide, Nickel (II) carbonate (anhydrous), Nickel (II) carbonate (basic), Manganese (II) carbonate, Magnesium carbonate (basic), Magnesium carbonate hydroxide, Ammonium bicarbonate, Ammonium hydrogen carbonate, Ammonium carbonate, Nickel (II) hydroxide, Calcium phosphate hydroxide, Calcium phosphate tribasic, limestone, Magnesite, lime, slaked lime, magnesium oxide, and/or any combination thereof; and, at least one sulfamic compound, selected from the group consisting of a compound of the formula (II): HSO.sub.3NR.sup.4R.sup.5 (II) wherein: R.sup.4 and R.sup.5 are independently selected from the group consisting of hydrogen and a monovalent hydrocarbyl group containing from 1 to about 10 carbon atoms; and at least one of R.sup.4 or R.sup.5 is hydrogen; a compound of the formula (III): R.sup.1(NR.sup.2R.sup.3).sub.n.nHSO.sub.3NR.sup.4R.sup.5 (III) wherein: R.sup.1 is selected from the group consisting of alkyl, hydroxyalkyl, cycloalkyl, and aryl, R.sup.2 is selected from the group consisting of hydrogen, alkyl, hydroxyalkyl, cycloalkyl and aryl; R.sup.3, R.sup.4 and R.sup.5 are hydrogen; and n is an integer from 1 to 3; and, combinations thereof.

Claim 5. The method according to claim1, wherein said composition further comprises a plant promoting effective amount of water.

Claim 7. A composition comprising: the product of a moderately water soluble first compound including a sulfamic moiety and a substantially water insoluble second compound including macronutrient and/or micronutrient moieties that have been chemically reacted in respective proportions sufficient to provide substantially any combination of water solution-stable macronutrients and/or micronutrients of substantially any predetermined concentration and/or predetermined concentrations.

Claim 8. The composition of claim 7, further comprising: a plant promoting effective amount of solution stable Ca^{++} moieties; a plant promoting effective amount of solution stable S^{6+} moieties; a plant promoting effective amount of solution stable Mg^{++} moieties; and, a plant promoting effective amount of solution stable N^{3-} moieties.

Claim 9. The composition of claim 8, wherein said solution stable moieties are a reaction product formed from the reaction of: a first reactant selected from the group consisting of Sulfamic acid, a water soluble Sulfamic acid derivative, an oil soluble Sulfamic acid derivative that can be reacted to provide a water solution stable Sulfamate, and combinations thereof; and a second micronutrient and/or macronutrient moiety-including reactant selected from the group consisting of a carbonate, a hydroxide, a carbonate hydroxide, a hydroxide oxide, a metal, and combinations thereof.

Claim 10. The composition of claim 8 further comprising: a compensating amount of said micronutrient or macronutrient included in a solution stable compound formed by the reaction of effective amounts of: at least one member selected from the group consisting of: Dolomite, a powdered micronutrient metal, a powdered macronutrient metal, Aragonite (Calcium Carbonate), Artinite (Hydrated Magnesium Carbonate Hydroxide),

Aurichalcite (Zinc Copper Carbonate Hydroxide), Azurite (Copper Carbonate Hydroxide), Barringtonite (Hydrated Magnesium Carbonate), Baylissite (Hydrated Potassium Magnesium Carbonate), Brugnatellite (Hydrated Magnesium Iron Carbonate Hydroxide), Butschliite (Potassium Calcium Carbonate), Calcite (Calcium Carbonate), Gaspeite (Nickel Magnesium Iron Carbonate), Magnesite (Magnesium Carbonate), Rhodochrosite (Manganese Carbonate), Siderite (Iron Carbonate), Smithsonite (Zinc Carbonate), Ankerite (Calcium Iron Carbonate), Huntite (Calcium Magnesium Carbonate), Kutnohorite (Calcium Manganese Magnesium Iron Carbonate), Minrecordite (Calcium Zinc Carbonate), Norsethite (Barium Magnesium Carbonate), Fairchildite (Potassium Calcium Carbonate), Georgeite (Hydrated Copper Carbonate Hydroxide), Hellyerite (Hydrated Nickel Carbonate), Hydrozincite (Zinc Carbonate Hydroxide), Ikaite (Hydrated Calcium Carbonate), Kalicinite (Potassium Bicarbonate), Lansfordite (Hydrated Magnesium Carbonate), Loseyite (Manganese Zinc Carbonate Hydroxide), Malachite (Copper Carbonate Hydroxide), Monohydrocalcite (Hydrated Calcium Carbonate), Nesquehonite (Hydrated Magnesium Bicarbonate Hydroxide), Pokrovskite (Hydrated Magnesium Carbonate Hydroxide), Pyroaurite (Hydrated Magnesium Iron Carbonate Hydroxide), Glaukospherite (Copper Nickel Carbonate Hydroxide), Mcguinnessite (Magnesium Copper Carbonate Hydroxide), Nullaginite (Nickel Carbonate Hydroxide), Rosasite (Copper Zinc Carbonate Hydroxide), Zincrosasite (Zinc Copper Carbonate Hydroxide), Sclarite (Zinc Magnesium Manganese Carbonate Hydroxide), Sergeevite (Hydrated Calcium Magnesium Carbonate Bicarbonate Hydroxide), Sjogrenite (Hydrated Magnesium Iron Carbonate Hydroxide), Teschemacherite (Ammonia Bicarbonate), Vaterite (Calcium Carbonate), Zaratite (Hydrated Nickel Carbonate Hydroxide), Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Tetramethylammonium hydroxide, Tetraethylammonium hydroxide, Iron (III) oxyhydroxide, Iron (III) hydroxide (gamma), Iron (III) hydroxide (alpha), Potassium

hydroxide, Nickel (II) hydroxide, Hexane-1,6-bis(tributylammonium) dihydroxide, Calcium hydroxide, Tetra-n-propylammonium hydroxide, Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Cobalt (II) hydroxide, Copper (II) carbonate dihydroxide, Copper (II) carbonate (basic), Copper (II) hydroxide, Ammonium hydroxide, Magnesium carbonate hydroxide, Methylboron dihydroxide, Magnesium hydroxide, Molybdenum hydroxide oxide phosphate Calcium phosphate hydroxide, Calcium phosphate tribasic, Calcium hydroxide, Zinc subcarbonate, Zinc carbonate (basic), Zinc carbonate hydroxide, Zinc hydroxide, Potassium bicarbonate, Potassium hydrogen carbonate, Potassium carbonate, Nickel (II) carbonate, Nickel (II) carbonate hydroxide, Nickel (II) carbonate (anhydrous), Nickel (II) carbonate (basic), Manganese (II) carbonate, Magnesium carbonate (basic), Magnesium carbonate hydroxide, Ammonium bicarbonate, Ammonium hydrogen carbonate, Ammonium carbonate, Nickel (II) hydroxide, Calcium phosphate hydroxide, Calcium phosphate tribasic, limestone, Magnesite, lime, slaked lime, magnesium oxide, and/or any combination thereof; and, at least one sulfamic compound selected from the group consisting of: a compound of the formula (II): $HSO_3NR^4R^5$

(II) wherein: R^4 and R^5 are independently selected from the group consisting of hydrogen and a monovalent hydrocarbyl group containing from 1 to about 10 carbon atoms; and at least one of R^4 or R^5 is hydrogen; a compound of the formula (III): $R^1(NR^2R^3)_n \cdot nHSO_3NR^4R^5$

(III) wherein: R^1 is selected from the group consisting of alkyl, hydroxyalkyl, cycloalkyl, and aryl, R^2 is selected from the group consisting of hydrogen, alkyl, hydroxyalkyl, cycloalkyl and aryl; R^3, R^4 and R^5 are hydrogen; and, n is an integer from 1 to 3; and, combinations thereof.

Claim 11. The composition according to claim 7, wherein said reaction product is water-soluble.

Claim 12. The composition according to claim 7, further comprising a plant promoting effective amount of water.

Claim 14. A method for treating living cells, comprising: contacting said living cells with a composition comprising the product of a moderately water soluble first compound including a sulfamic moiety and a substantially water insoluble second compound including macronutrient and/or micronutrient moieties chemically reacted in respective proportions sufficient to provide substantially any combination of water solution-stable macronutrients and/or micronutrients of substantially any predetermined concentration and/or predetermined concentrations.

Claim 15. The method of claim 14, wherein said composition_further comprises: a cell-promoting effective amount of solution-stable Ca.sup.++ moieties; a cell-promoting effective amount of solution-stable S.sup.6+ moieties; a cell-promoting effective amount of solution-stable Mg.sup.++ moieties; and, a cell-promoting effective amount of solution-stable N.sup.3- moieties.

Claim 16. The method of claim 14, wherein said solution-stable moieties are a reaction product formed from the reaction of: a first reactant selected from the group consisting of Sulfamic acid, a water soluble Sulfamic acid derivative, an oil soluble Sulfamic acid derivative that can be reacted to provide a water solution-stable Sulfamate, and combinations thereof; and, a second micronutrient and/or macronutrient moiety-including reactant selected from the group consisting of a carbonate, a hydroxide, a carbonate hydroxide, a hydroxide oxide, a metal, and combinations thereof.

Claim 17. The method of claim 15, wherein the solution-stable moieties are formed by reacting effective amounts of: at least one member selected from the group consisting of: Dolomite, a powdered micronutrient metal, a powdered macronutrient metal, Aragonite (Calcium Carbonate), Artinite (Hydrated Magnesium Carbonate Hydroxide), Aurichalcite (Zinc Copper Carbonate Hydroxide), Azurite (Copper Carbonate Hydroxide), Barringtonite (Hydrated Magnesium Carbonate), Baylissite (Hydrated Potassium Magnesium Carbonate), Brugnatellite (Hydrated Magnesium Iron Carbonate Hydroxide), Butschliite (Potassium Calcium Carbonate), Calcite (Calcium Carbonate), Gaspeite (Nickel Magnesium Iron Carbonate), Magnesite (Magnesium Carbonate), Rhodochrosite (Manganese Carbonate), Siderite (Iron Carbonate), Smithsonite (Zinc Carbonate), Ankerite (Calcium Iron Carbonate), Huntite (Calcium Magnesium Carbonate), Kutnohorite (Calcium Manganese Magnesium Iron Carbonate), Minrecordite (Calcium Zinc Carbonate), Norsethite (Barium Magnesium Carbonate), Fairchildite (Potassium Calcium Carbonate), Georgeite (Hydrated Copper Carbonate Hydroxide), Hellyerite (Hydrated Nickel Carbonate), Hydrozincite (Zinc Carbonate Hydroxide), Ikaite (Hydrated Calcium Carbonate), Kalicinite (Potassium Bicarbonate), Lansfordite (Hydrated Magnesium Carbonate), Loseyite (Manganese Zinc Carbonate Hydroxide), Malachite (Copper Carbonate Hydroxide), Monohydrocalcite (Hydrated Calcium Carbonate), Nesquehonite (Hydrated Magnesium Bicarbonate Hydroxide), Pokrovskite (Hydrated Magnesium Carbonate Hydroxide), Pyroaurite (Hydrated Magnesium Iron Carbonate Hydroxide), Glaukospherite (Copper Nickel Carbonate Hydroxide), Mcguinnessite (Magnesium Copper Carbonate Hydroxide), Nullaginite (Nickel Carbonate Hydroxide), Rosasite (Copper Zinc Carbonate Hydroxide), Zincrosasite (Zinc Copper Carbonate Hydroxide), Sclarite (Zinc Magnesium Manganese Carbonate Hydroxide), Sergeevite (Hydrated Calcium Magnesium Carbonate Bicarbonate Hydroxide), Sjogrenite (Hydrated Magnesium Iron Carbonate Hydroxide), Teschemacherite (Ammonia Bicarbonate),

Vaterite (Calcium Carbonate), Zaratite (Hydrated Nickel Carbonate Hydroxide), Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Tetramethylammonium hydroxide, Tetraethylammonium hydroxide, Iron (III) oxyhydroxide, Iron (III) hydroxide (gamma), Iron (III) hydroxide (alpha), Potassium hydroxide, Nickel (II) hydroxide, Hexane-1,6-bis(tributylammonium) dihydroxide, Calcium hydroxide, Tetra-n-propylammonium hydroxide, Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Cobalt (II) hydroxide, Copper (II) carbonate dihydroxide, Copper (II) carbonate (basic), Copper (II) hydroxide, Ammonium hydroxide, Magnesium carbonate hydroxide, Methylboron dihydroxide, Magnesium hydroxide, Molybdenum hydroxide oxide phosphate Calcium phosphate hydroxide, Calcium phosphate tribasic, Calcium hydroxide, Zinc subcarbonate, Zinc carbonate (basic), Zinc carbonate hydroxide, Zinc hydroxide, Potassium bicarbonate, Potassium hydrogen carbonate, Potassium carbonate, Nickel (II) carbonate, Nickel (II) carbonate hydroxide, Nickel (II) carbonate (anhydrous), Nickel (II) carbonate (basic), Manganese (II) carbonate, Magnesium carbonate (basic), Magnesium carbonate hydroxide, Ammonium bicarbonate, Ammonium hydrogen carbonate, Ammonium carbonate, Nickel (II) hydroxide, Calcium phosphate hydroxide, Calcium phosphate tribasic, limestone, Magnesite, lime, slaked lime, magnesium oxide, and/or any combination thereof; and, at least one sulfamic compound, selected from the group consisting of: a compound of the formula (II): HSO.sub.3NR.sup.4R.sup.5 (II) wherein: R.sup.4 and R.sup.5 are independently selected from the group consisting of hydrogen and a monovalent hydrocarbyl group containing from 1 to about 10 carbon atoms; and at least one of R.sup.4 or R.sup.5 is hydrogen; a compound of the formula (III): R.sup.1(NR.sup.2R.sup.3).sub.n.nHSO.sub.3NR.sup.4R.sup.5 (III) wherein: R.sup.1 is selected from the group consisting of alkyl, hydroxyalkyl, cycloalkyl, and aryl, R.sup.2 is selected from the group consisting of hydrogen, alkyl, hydroxyalkyl, cycloalkyl and aryl;

R.sup.3, R.sup.4 and R.sup.5 are hydrogen; and n is an integer from 1 to 3; and, combinations thereof.

Claim 18. The method according to claim 14, wherein said composition further comprises a cell-promoting effective amount of water.

Claim 19. The method according to claim 14, wherein said composition is encapsulated.

Claim 20. The method according to claim 14, wherein said cells are selected from the group consisting of living cells, animal cells, plant cells and combinations thereof.

Claim 21. A process for forming a composition, comprising: chemically reacting a moderately water soluble first compound including a sulfamic moiety and a substantially water insoluble second compound including macronutrient and/or micronutrient moieties at concentrations and under conditions sufficient to provide a product of substantially any predetermined combination of water solution-stable macronutrients and/or micronutrients of substantially any concentration and/or concentrations.

Claim 22. The process of claim 21, wherein said product further comprising: a plant or cell promoting effective amount of solution stable Ca^{++} moieties; a plant or cell promoting effective amount of solution stable S^{6+} moieties; a plant or cell promoting effective amount of solution stable Mg^{++} moieties; and, a plant or cell promoting effective amount of solution stable N^{3-} moieties.

Claim 23. The process of claim 22, wherein said concentrations and/or said conditions further comprise an acidic environment.

Claim 24. The process of claim 22, wherein the solution stable moieties are formed by reacting effective amounts of: at least one member selected from the group consisting

of: Dolomite, Aragonite (Calcium Carbonate), Artinite (Hydrated Magnesium Carbonate Hydroxide), Aurichalcite (Zinc Copper Carbonate Hydroxide), Azurite (Copper Carbonate Hydroxide), Barringtonite (Hydrated Magnesium Carbonate), Baylissite (Hydrated Potassium Magnesium Carbonate), Brugnatellite (Hydrated Magnesium Iron Carbonate Hydroxide), Butschliite (Potassium Calcium Carbonate), Calcite (Calcium Carbonate), Gaspeite (Nickel Magnesium Iron Carbonate), Magnesite (Magnesium Carbonate), Rhodochrosite (Manganese Carbonate), Siderite (Iron Carbonate), Smithsonite (Zinc Carbonate), Ankerite (Calcium Iron Carbonate), Huntite (Calcium Magnesium Carbonate), Kutnohorite (Calcium Manganese Magnesium Iron Carbonate), Minrecordite (Calcium Zinc Carbonate), Norsethite (Barium Magnesium Carbonate), Fairchildite (Potassium Calcium Carbonate), Georgeite (Hydrated Copper Carbonate Hydroxide), Hellyerite (Hydrated Nickel Carbonate), Hydrozincite (Zinc Carbonate Hydroxide), Ikaite (Hydrated Calcium Carbonate), Kalicinite (Potassium Bicarbonate), Lansfordite (Hydrated Magnesium Carbonate), Loseyite (Manganese Zinc Carbonate Hydroxide), Malachite (Copper Carbonate Hydroxide), Monohydrocalcite (Hydrated Calcium Carbonate), Nesquehonite (Hydrated Magnesium Bicarbonate Hydroxide), Pokrovskite (Hydrated Magnesium Carbonate Hydroxide), Pyroaurite (Hydrated Magnesium Iron Carbonate Hydroxide), Glaukospherite (Copper Nickel Carbonate Hydroxide), Mcguinnessite (Magnesium Copper Carbonate Hydroxide), Nullaginite (Nickel Carbonate Hydroxide), Rosasite (Copper Zinc Carbonate Hydroxide), Zincrosasite (Zinc Copper Carbonate Hydroxide), Sclarite (Zinc Magnesium Manganese Carbonate Hydroxide), Sergeevite (Hydrated Calcium Magnesium Carbonate Bicarbonate Hydroxide), Sjogrenite (Hydrated Magnesium Iron Carbonate Hydroxide), Teschemacherite (Ammonia Bicarbonate), Vaterite (Calcium Carbonate), Zaratite (Hydrated Nickel Carbonate Hydroxide), Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Tetramethylammonium hydroxide, Tetraethylammonium

hydroxide, Iron (III) oxyhydroxide, Iron (III) hydroxide (gamma), Iron (III) hydroxide, (alpha), Potassium hydroxide, Nickel (II) hydroxide, Hexane-1,6-bis (tributylammonium)dihydroxide, Calcium hydroxide, Tetra-n-propylammonium hydroxide, Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Cobalt (II) hydroxide, Copper (II) carbonate dihydroxide, Copper (II) carbonate (basic), Copper (II) hydroxide, Ammonium hydroxide, Magnesium carbonate hydroxide, Methylboron dihydroxide, Magnesium hydroxide, Molybdenum hydroxide oxide phosphate Calcium phosphate hydroxide, Calcium phosphate tribasic, Calcium hydroxide, Zinc subcarbonate, Zinc carbonate (basic), Zinc carbonate hydroxide, Zinc hydroxide, Potassium bicarbonate, Potassium hydrogen carbonate, Potassium carbonate, Nickel (II) carbonate, Nickel (II) carbonate hydroxide, Nickel (II) carbonate (anhydrous), Nickel (II) carbonate (basic), Manganese (II) carbonate, Magnesium carbonate (basic), Magnesium carbonate hydroxide, Ammonium bicarbonate, Ammonium hydrogen carbonate, Ammonium carbonate, Nickel (II) hydroxide, Calcium phosphate hydroxide, Calcium phosphate tribasic, limestone, Magnesite, lime, slaked lime, magnesium oxide, and/or any combination thereof; and, at least one sulfamic compound, selected from the group consisting of: a compound of the formula (II):

$HOSO_2NR^4R^5$ (II)

wherein: R^4 and R^5 are independently selected from the group consisting of hydrogen and a monovalent hydrocarbyl group containing from 1 to about 10 carbon atoms; and at least one of R^4 or R^5 is hydrogen; a compound of the formula (III): $R^1(NR^2R^3)_n \cdot nHOSO_2NR^4R^5$ (III)

wherein: R^1 is selected from the group consisting of alkyl, hydroxyalkyl, cycloalkyl, and aryl, R^2 is selected from the group consisting of hydrogen, alkyl, hydroxyalkyl, cycloalkyl

and aryl; R^3, R^4 and R^5 are hydrogen; and n is an integer from 1 to 3; and, combinations thereof.

Claim 25. The process of claim 22, wherein said composition is water based, and said reaction product is water-soluble.

Claim 26. The process of claim 25, further comprising a plant or cell promoting effective amount of water.